

CBCS SCHEME

15CS/IS562



Fifth Semester B.E. Degree Examination, Jan./Feb. 2021 Artificial Intelligence

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. What is an AI technique? Explain in terms of knowledge representation. (05 Marks)
b. Distinguish Breadth-First search and Depth First search. (06 Marks)
c. Write an algorithm for simple Hill climbing. (05 Marks)

OR

- 2 a. On what dimensions problems are analyzed? (08 Marks)
b. Mention issues in design of search problem. (03 Marks)
c. Write a note on constraint satisfaction. (05 Marks)

Module-2

- 3 a. Explain and illustrate unification algorithm. (06 Marks)
b. What are the properties of a good system for the representation of knowledge? (04 Marks)
c. Discuss how forward reasoning is different from backward reasoning. (06 Marks)

OR

- 4 a. With an illustration explain the process of converting well formed formulas to clause form. (08 Marks)
b. Write a note on : i) Conflict resolution ii) Logic programming. (08 Marks)

Module-3

- 5 a. With an example, explain semantic networks. (05 Marks)
b. What is nonmonotonic reasoning? Describe logics for monotonic reasoning. (05 Marks)
c. Which are the key issues to be addressed in nonmonotonic reasoning system? (06 Marks)

OR

- 6 a. Describe the implementation issues of nonmonotonic reasoning system. (05 Marks)
b. Write a note on Bayesian networks. (05 Marks)
c. Explain a simplified frame system with an example. (06 Marks)

Module-4

- 7 a. Why we should build a large knowledge base? (04 Marks)
b. Write the algorithm for MINIMAX. (08 Marks)
c. What is iterative deepening? (04 Marks)

OR

- 8 a. Explain the different dependencies of Conceptual Dependency. (10 Marks)
b. Write a note on Global Ontology. (06 Marks)

Module-5

- 9 a. Enlist and explain different components of natural language understanding process. (08 Marks)
b. How can a program get better without the aid of a teacher? (08 Marks)

OR

- 10 a. Write a note on Analogy. (05 Marks)
b. Which are the capabilities of expert systems? (04 Marks)
c. Distinguish semantic and ease grammars. (07 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.